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SELECTED TRANSLATIONS ON THE  
STATUS OF PSYCHOLOGY IN CZECHOSLOVAKIA

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## FOREWORD

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SELECTED TRANSLATIONS ON THE  
STATUS OF PSYCHOLOGY IN CZECHOSLOVAKIA

[Following are the translations of selected articles, titles given in the table of contents, published in Activitas Nervosa Superior, Vol II, No 4, Prague, 1960. Additional bibliographic information given with each article.]

| <u>TABLE OF CONTENTS</u>  | <u>Page</u> |
|---|-------------|
| Orientalian Conditioned Motor Reflexes in One-Year Old Infants        | 1           |
| The Socialist Approach to Mental Hygiene                              | 10          |
| The Nature of Psychiatry: A Social or a Natural Science?              | 20          |
| The Relationship Between the Biological and the Social in Psychiatry  | 33          |
| Second Czechoslovak National Psychiatric Conference on Mental Hygiene | 37          |

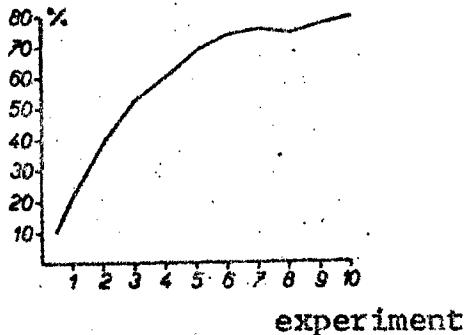
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ORIENTATIONAL CONDITIONED MOTOR REFLEXES  
IN ONE YEAR-OLD INFANTS

[Following is the translation of an article by Jaroslav Koch in Activitas Nervosa Superior, Vol II, No 4, Prague, 1960, pages 414-418.]

The greatest educational problems facing the nurseries, kindergartens and children's homes are connected with the care of the older nursing infants and the smaller crawling infants. The research men who could help the nurses take care of these children, however, shun any experimental work with children in this age-group; therefore, literature on the higher nervous activity of one year-olds is relatively poor.

The higher nervous activity of this age-group has been primarily studied by the following Soviet authors: N. M. Shchelovanov, N. M. Aksarinova, N. L. Figurin, M. P. Denisova, N. J. Kasatkin, A. C. Nemanova, M. M. Koltsovova, L. A. Orbeili with his co-workers, L. J. Barbasova and others.



Graph 1. Percentage Curve of Reactions  
Obtained During an Experiment With  
Conditioned Reflexes.

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The problem was the so-called conditioned motor reflexes, how they are reflected in one-year olds and what are their peculiarities, seen on the basis of an orientational reflex. We chose conditioned motor reflexes because they predominate over the simplest unconditioned reflexes in one-year olds. This can be worked out in several ways, so far not used in experiments or adequately utilized or understood (for example, the method of working out motor-conditioned reflexes through motor instruction). We chose the orientational reflex because it occupies a major position in the hierarchy of non-conditioned reflexes of one-year old children.

The Method

The method was discussed more thoroughly in Cesko-slovenska Pediatrie (Czechoslovak Pediatrics), Vol XI, No 11, 1956, pages 814-819. In the main experiment, the child is sitting in a chair with a horizontal lever in front of it. When the lever is pulled, it opens a curtain to a stage with a colorful moving figurine. The child first becomes acquainted with the mechanism of the lever and the result of its pulling by the trial-and-error method. Then the tester disconnects the curtain and connects it only at a signal. When the bell rings, an assistant puts the child's hands on the lever and they open the curtain together. Motor instruction is repeated whenever the child does not react to the signal. The curtain stays open 20 seconds, after which it closes by itself. In one experiment that lasted about 12 minutes, there were 12 tries. After the conditioned reflex has been established, we take up the problem of gradual extinction, renew the reflex, work out the difference between the two signals, and finally rearrange the meaning of the signal. These experiments will be noted later. We also observe children during free play, when falling asleep, sleeping, feeding and other natural circumstances.

In all, 13 normal, healthy children between the ages of 9-15 months were tested. The testing of one child takes about 2 months and demands about 12-15 working days.

Table 1. The Number of Combinations of Conditioned and Non-Conditioned Experiments Necessary to Establish Conditioned Reflex

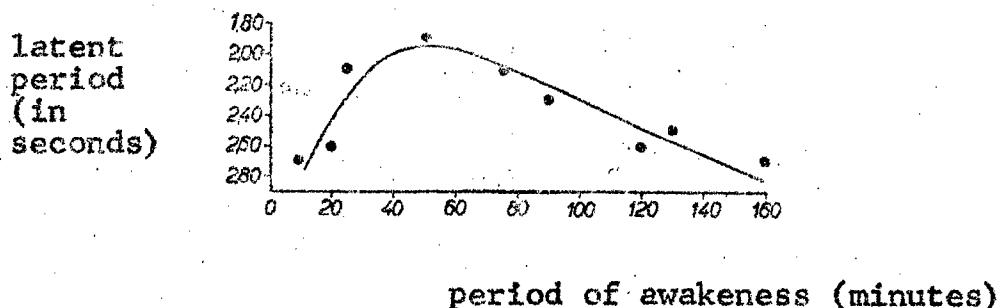
| Child                  | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. |
|------------------------|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|
| Number of Combinations | 50 | 45 | 54 | 11 | 4  | 23 | 10 | 10 | 10 | 130 | 35  | 15  | 11  |

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Results

Objectively Recorded Results

The speed of working out conditioned motor reflexes is determined by the number of associations of conditioned (the bell) and non-conditioned stimuli (the colorful figurine), that were necessary to make the child itself react to five consecutive signals. The combinations of both stimuli was accomplished by the motor instruction of the tester and later by the child's individual and independent reactions.



Graph 2. Child H. H. The Relations Between the Latent Period and a Waking State

The smallest number of combinations necessary for the establishment of a proven conditioned reflex was 4, the highest was 130, the average 31.4 and the medium, most important in our case, was 15 (see Table 1).

Average data computed from the first 10 experiments of all the children (see Graph 1) show a gradual accumulation of the correct reactions; at first the number of correct reflexes climbs quickly, during the sixth time they react correctly 7 times out of 10 tries. After the sixth time, the number of correct reactions climbs only slowly and after the tenth time, it hardly goes up.

Eleven out of 13 children had a 100%-correct reaction in some experiments. Two children achieved such performance already in the second experiment. Half of the children tested had a 100% reaction at least up to the eighth experiment. Both the children who had reacted properly the first 2 times, reacted the same way up to the tenth experiment. Children who achieved 100% performance later, began to show an improvement in rhythmic waves. Irregularity of the rhythmic wave was always a signal of

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Table 2. Average Period of Latency in Seconds

| Child           | 1.   | 2.   | 3.   | 4.   | 5.   | 6.   | 7.   | 8.   | 9.   | 10.  | 11.  | 12.  | 13.  |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Average latency | 3.94 | 4.27 | 4.58 | 3.27 | 2.38 | 3.49 | 3.54 | 4.56 | 2.53 | 5.00 | 3.34 | 4.18 | 2.84 |

Latency was measured from the beginning of the signal to the beginning of the movement of the lever. The average latency was computed from the date of experiments on established conditioned reflex. The fastest child reacts twice as fast as the slowest one (2.38 seconds to 5.00 seconds). The faster the child reacts, the greater is the speed with which it reacts. With slow children, the period of latency varies (the correlation between the average and maximum latency is  $-r= 0.76$  at 5% line of significance. The faster the child works out its conditioned reflex, the faster it reacts to the signal ( $r= 0.71$ ).

In seven out of 13 children the average period of latency during the experiments depends on the particular stage of awakeness during which the experiment is conducted. With these children the period of latency after sleeping gradually becomes shorter, reaches the minimum of 30-100 minutes and then again becomes longer. See Graph 2 as an example.

The more stable the response of the child, the more pronounced is the above-indicated evidence. Children whose pattern could not be fully ascertained, changed their responses from day to day very significantly, so that the data obtained on various days could not be averaged out at all. Yet, if we compare isolated results from individual experimental days, we notice that even with these children the period of latency first becomes shorter and then longer.

If in 10 seconds after the bell rang the child did not open the curtain, i.e., either it did not even grasp the lever or grasped it but did not pull it, the experiment was called unsuccessful.

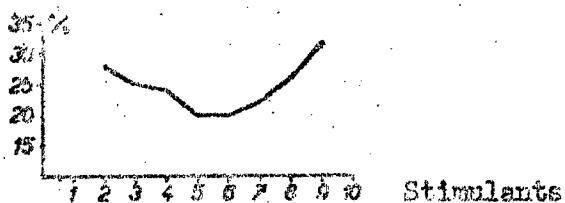
Table 3 shows the average number of unsuccessful reactions to each signal for an individual child. The values are set according to the data obtained from experiments on a proven conditioned reflex based on established criteria. A child that did not react to the given signal in the expected fashion would not react 9 times as often as the child that was most dependable (0.45:0.05).

The children who have often failed to react to the given signal show vacillation which was referred to above. The number of unsuccessful reactions decreases after sleeping

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and again rises before sleeping.

In the course of the experiment that normally ran 12 minutes, the number of unsuccessful reactions changes periodically. Summary curve in Graph 3, drawn on the basis of mean data of all the children, shows that at first the unsuccessful experiments diminish, the best reaction is obtained between 5-7 minutes, and then the unsuccessful reactions again increase. This curve can be seen in almost every individual child. The children varied only in the position of the minimum.



Graph 3. Percentage Curve of Non-Reactions to Stimulants During the Course of the Experiments

The reaction to the completion of an unconditioned stimulus (closing of the curtain) brought another observation: the faster the children react to the bell, the slower do they release the lever after the curtain closes.

If the lever was grasped and pulled not according to the bell, we called this reaction the intersignal reaction. The intersignal reactions gradually diminished both in individual experiments as well as in the whole series. Those children who had frequent intersignal reactions were also easily stimulated in other situations. The liveliest child reacted 5 times as often intersignally than the quietest child.

Results Obtained by Observing Children

In working out the conditioned motor reflex, the child's behavior changes and goes through these 5 phases:

1. The beginning phase : As soon as the bell rings, the child immediately stops its present occupation, looks around, usually in the direction of the sound. After a motor instruction, it opens the curtain and looks at the stage.

2. Phase of indicated conditioned reflex. First the child looks toward the bell, then it turns toward

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the curtain. It has to receive motor instruction in order to open the curtain.

Table 3. The Average Number of Unsuccessful Reactions to a Particular Experiment.

| Child's name             | V.S. | J.H. | I.K. | E.M. | H.H. | P.J. | H.P. | L.S. | P.C. | J.H. | K.C. | I.B. | J.J. |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Average number of misses | 0,31 | 0,23 | 0,45 | 0,21 | 0,05 | 0,18 | 0,27 | 0,24 | 0,45 | 0,33 | 0,13 | 0,36 | 0,12 |

3. Phase of determined conditioned reflex. The beginnings are the same as in Phase 2, but the child grasps the lever by itself and opens the curtain.

4. Phase of perfected conditioned reflex. The child immediately turns toward the curtain, raises its hands at the same time and opens the curtain.

5. Phase of stable conditioned reflex. The child immediately turns to the curtain; at the same time it raises its hand and opens the curtain.

Learning the conditioned reflex did not take the same time with all the children. Some went through all of the phases in the first test while others did so in 10 attempts, some stopped in a particular phase for a length of time, or did not even get to the last phase. Under unsatisfactory conditions (such as poor health) there were regressions. The children would eventually return to a more primitive stage.

In testing the conditioned reflex, the force of motor instruction should be carefully watched. We recognize 5 degrees of its strength:

1 degree: "a nudge" -- the child's elbow is touched lightly;

2 degree: the child's hands are put on the lever, the child does not resist the motion and pulls the lever by itself;

3 degree: same as the second degree, but we pull the lever with the child;

4 degree: same as the third degree, but the child shows a slight resistance;

5 degree: same as the third degree, but the child shows a stronger resistance.

We did not use the fifth degree of motor instruction because it led to the child's aversion to the experiment.

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As soon as the child reaches the state in which it needs to be used, the experiment is over. This state is remarkable and usually occurs when the child is tired of the test.

During the conditioned reflex experiment, motor instructions had to be changed. This change again had five phases:

- Phase 1: The child is passive; it has to get 3-4th degree of instruction to show some reaction.
- Phase 2: It is sufficient that the child's hands are placed on the lever; it pulls it all by itself.
- Phase 3: A "nudge" is sufficient.
- Phase 4: (Occurs only with some children). Upon the signal, the child turns toward the instructor and waits for instruction.
- Phase 5: The child reacts to the signal without any instruction.

The third phase takes a considerably longer time with timid children. Some children needed 2-3 "nudges" in this phase because they would show only a partial reaction, for example, by turning toward the curtain, then grasping it and finally pulling it. The fourth phase could be seen in children who in natural situations would be unsociable, "obedient" or frightened and timid.

A qualitative analysis of "unsuccessful reactions" presents interesting observations. Between signals, the children were not unoccupied. They would play with their fingers, clothes, chattered, etc. The more intensive was their activity, the less chance was there for them to react to the signal.

The recording machines recorded only the final reaction of the children -- the pulling of the lever. Before doing this, the children had to do a number of other preparatory things, such as, for example, straighten up if it happened to be slumping down in its chair, turn around to the front, bend over, let go of its shirt if it was playing with it, etc. All the children reacted to a given signal in a particular way -- some would quickly run through all the necessary motions until the end, others did only a part of them and did not get to the end (for example, they got as far as grasping the lever, but did not pull it). Some children reacted in spurts. For example, on a signal, the child would straighten up. After a while it would turn toward the lever, grasp it, etc. In this way, latency would get longer, go beyond the time limit and the reaction was termed "unsuccessful". In the majority of the children, these movements fell into a comprehensive and continuous whole.

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In some children there was a stage of temporary dis-interest that worked in regular intervals. Then the children reacted as if such reflex was not developed; they looked around surprised as if it were the first time they heard the signal and turned neither to the curtain nor to the lever.

They grasped the lever and pounded on the table first by raising their arms. Sometimes the children would raise their arms when the bell rang and instead of grasping the lever as expected, they pounded the table enthusiastically. Similar "slipping" into another motion that has the same beginning as the correct one could be observed in other situations also.

Discussion

It cannot be said that the introduction of a new conditioned reflex to one-year olds is the mere creation of a new combination. This process is the most basic one and simultaneous with others, but not an individual one. The conditioned motor reflex in one-year olds represents a whole complex of combinations, suppressions, differentiations and changes in the significance of the signal stimulus.

The established conditioned reaction is a complicated chain of movements of the great system of muscles. The older the child, the faster it loses the reflex character of utter immovability. Individual reactions vary even more and involve a number of separate movements. The common signal for these various movements is the attempt to achieve stability (to look at the figurine). As opposed to the younger nursing babies, who can react to a given signal with a simple movement, the one-year old is able to react with a whole system of motor stereotypes that arise during the ontogenesis stage. The selection of an appropriate stereotype is regulated by the immediate situation in which the child finds itself; regressive afference plays a big role in this respect. The last link in the motion chain (visual orientation toward the figurine) is more stable and represents the initial unconditioned oriented reaction, whereas the preceding motor reactions are conditioned and of an adaptable character. The younger the child, the more isolated are the newly established motor reactions and the less they represent balanced units. That is why some children reacted partially and only gradually connected segments of movements into a balanced motor unit. The individual partial movements are parts of various motion units. That can be explained

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by the "slipping" into other movements out of proportion with the given situation (on a signal the child will raise its hands and starts to pound the table instead of grasping the lever).

The speed with which conditioned motor reflex and latency were established in our experiments depends on the strength of the oriented reflex. The stronger the oriented reflex, the faster can we determine the conditioned reflex and the shorter the latency period, the more accurately and dependably does the child react and the longer the period in which the child will release the lever after the curtain closes.

The CNS excitability of one-year olds undergoes constant change and the character of this change is shown in complex waves. For example, the period of latency depends rather on the child's progressive stage of awakeness in which we are conducting the experiment with the child rather than how many times we repeat it.

Motor instruction is a significant and direct instruction into the child's system of nerve processes. As opposed to the "hit-and-miss" method, by which the child has to work out its own conditioned reflexes, the motor instruction method is important because under its influence the children gain new conditioned reflexes faster, more economically and under better controlled conditions.

Conclusions

1. The speed in which the oriented and stabilized conditioned motor reflex is established in one-year olds and its stability and development depend primarily on the force of the oriented reflex.

2. The conditioned motor reflex can be seen in one-year olds by the fact that the child reacts with a whole complex of stereotypes it had assumed in its ontogenesis and out of which it chooses adequate motor reactions according to the circumstance at hand. Regressive afferentation plays a decisive role in this respect. The older the child, the longer, more varied and more pliable and coherent is the chain of preparatory movements before the final movement that introduces stability.

3. Among other things, the quality of motor reflexes depends on the stage of the period of awakeness during this reaction. The CNS excitability varies in one-year olds during the period of awakeness: After sleep it increases, it is at its peak between the 30th and 120th minute, and then again decreases. The change of the CNS excitability is very regular with some children

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with others its level varies daily. These children definitely cause trouble while growing up.

4. In one-year olds, excitability vacillates continually.

5. Motor instruction speeds the establishment of conditioned reflexes and obstructs the occurrence of undesirable secondary conditioned reflexes that disrupt not only the experiments but also the upbringing.

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## THE SOCIALIST APPROACH TO MENTAL HYGIENE

[Following is the translation of an article by Milos Machac in Activitas Nervos Superior, Vol II, No 4, Prague, 1960, pages 419-425.]

Historically, the rise of the concept of mental hygiene means that its problems still exist, especially in the preventive measures for mental health, care and possibly in the restriction of the cycle and the after-effects of mental illnesses (J. Stuchlik, Encyclopedia of the Practical Doctor, Prague, 1947, 1021).

Man's mental health -- just like his mental characteristics in general -- have to be understood in the scope of his relationship to the outside, primarily to his social environment. Even though many of the bourgeois psychologists and psychiatrists recognize the importance of social contacts in the building of man's mental character and also in the appearance of some of these mental disturbances, they do not understand or do not want to see the economic and political basis of these things. They point to the bad influence of conflicting social situations, but consider social contacts as inter-personal circumstances that can be explained on the basis of the individual's psyche, whether the man is a laborer, an administrator or a promoter. The logical result of such a concept is the effort to create mentally and hygienically acceptable social atmosphere -- more concretely, to remove the unhealthy socio-psychological results of capitalist class antagonisms -- merely with the help of mentally hygienic, educational and medical measures. That means, for example, that in accordance with similar concepts, the families, schools and real life need to adopt such educational measures that would deprive people of aggressive and exploitative tendencies, would lead them to respect human dignity and rid them of racial, religious and political prejudice and lead the people to mutual understanding and mutual harmonious cooperation, etc. (R. Kotinsky and H. L. Witver, ed., Community Programs for Mental Health, Cambridge, Mass., 1955, pages 173-4).

It is evident that mental health care, when seen in this light, can be the instrument of a reformist ideology of class reconciliation, that it can serve the ideological disorientation of the workers, yet it cannot actually

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improve the capitalistic way of life. Within social contacts, corrective measures are to create an illusion for the worker that his work is of a "free" character, that they are equal "partners" with the capitalists. This is most important especially in the era of automatization of production that demands initiative, independence and a feeling of responsibility even in the rank and file worker.

If we support the view that in society, the social and economic conditions of life are important factors in the treatment of mental disorders, then we must seriously question whether it is proper, in the Marxist sense, to make use of bourgeois ideas that formulate the task of mental hygiene as the care of the mind. In mental hygiene, a sound mind is basically the result of the interrelationships between man's individuality and his social environment. The term mental health tells us nothing about this interrelationship. Whether it is the man who adapts himself to the interests of society or whether it works the other way. Whether the desired harmony between the individual and the society is in agreement or disagreement with the laws of social development, with the needs of social progress, etc. The term mental health simply says nothing about the make-up of this process, that goes on between the individual and society and that somehow enters into the care or disturbance of mental health.

We lose sight of reality when the tasks of mental hygiene go beyond the limits of a definite socio-economic context that, in the first place, should help to determine the concrete make-up of the mental hygiene program. In my opinion, when mental hygiene is limited merely to the area of preserving man's mental health is basically objective in itself, because it includes in itself the germs of the relativistic concept of the relation between the individual and society.

Fetishism in mental health automatically belittles the educational, economic, political, ideological and other social phenomena that at least theoretically could lead to the justification of everything that could serve as a "way" to the preservation of mental health of some people or some social groups. It is well known that religion and other superstitions, individualistic morality, various idealistic philosophical concepts and other such concepts can be such fetishes. Under such relativist concept as the "support of mental health", it is possible to support and there is support of political opportunism, reformism, conservatism and backwardness of all types.

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The socialist concept of mental hygiene is just being born. Our plans foresee the great importance this discipline may have and obviously will soon have in our society. If we are to remove certain misgivings with which mental hygiene still quite often meets in our country, we must, in the first place, put through its closest collaboration with the problems facing the life of our society and its theoretical development on a Marxist-Leninist basis. Our socialist concept of mental hygiene makes good use of the Marxist dialectic thesis on the dependence of man's psyche on his existence in society and the leading role of the needs and interests of the society in relation to the needs and interests of the individual.

The identification of mental hygiene with the prevention of mental illness is basically a negative view of the problems of mental hygiene. The exposition of positive tasks is very difficult for bourgeois mental hygiene due to the antagonistic social strife of the capitalistic society. It would mean the end of the so-called unbiased view of social relationships, to identify oneself openly with the needs of one or the other side and to seriously study the problems that far surpass the conventional sphere of "competence" of mental hygiene and are supposedly exclusively for social practitioners, politicians, enterprisers and such. Since the bourgeois mental hygiene cannot formulate its program in a positive manner both for the unemployed and at the same time the capitalist, it prefers to support the negative side that can be more or less understood apart from actual life within certain social economic format and away from socio-logical problems. The objective "medical" definition of the problems of mental hygiene by itself certainly cannot prevent the idea that under concrete analysis of the works of various bourgeois authors the most pressing social economic problems are omitted [see note].

([Note] Sol W. Ginsburg, for example, says: "Psychological theory certainly recognizes the harmful influence of such social conditions as unemployment, poor housing and discrimination of the minority groups... everything that has the character of destructive social reality, creates poor mental health..." [Sol W. Ginsburg, The Mental Health Movement and Its Theoretical Assumptions. Community Programs for Mental Health, Cambridge, Mass., 1955, p 20].

The above-mentioned author comes to the conclusion that the capitalist society is in "desperate need of a new concept of social life."

We often encounter a negative definition of the problems of mental hygiene even in our country. Under our socio-economic conditions, such a negative definition is

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insufficient and the result of the uncritical adoption of the objective approach to mental hygiene, which can be caused by the lack of consideration of its role in a socialist society. Certainly, competition also plays a big role here. In a socialist society a positively organized program of mental hygiene becomes basically more or less evident whenever it is viewed apart from the reality of our socio-economic form and standard of social development. Luckily, the basic political, economic and ideological interests of the members of our society are harmonious and we lack any antagonistic social quarrels. Thanks to this, the problem of a positive program for mental hygiene is a much lighter affair than the establishment of a positive program of mental hygiene under the capitalist system.

The positive formulation of the problems facing the socialist concept of mental hygiene does not, of course, mean the rejection of its problems in the treatment of mental disorders. Even after the capitalist socio-economic antagonism were removed, we were left with undesirable phenomena that threaten our people's mental health. There is, however, a marked difference. They lack that characteristic of fatalism against which our society would be defenseless. However, the positivistic formulation of the problems of mental hygiene demands that it is not classified as a discipline with a simplified visual angle that would put it into the health criteria as an illness.

A positivistic definition of mental hygiene must first of all admit that it is concerned with the problems of people who are fully employed in working for the society. With no exceptions these people are subjected to the demands of the society, its duties and tasks that are responsible for their position in the organization of work. The evaluation of these people concerns the quantity and the quality of their work, and is a problem of their social significance. The recognition of the social importance of one's work encourages the man, it raises his work performance and has a long-range influence on the positive side of his self-consciousness, mental stability and mental health. The desire to be a success and to attain social recognition of one's work is often so strong that it lets one neglect one's own health. Also failure and the inability to perform the tasks that man's initiative takes upon itself or which society places upon him, can harm his health. Only in the connection between man's practical activity in a concrete context and his social contacts can the problems of preventing mental illness become positive. Mental health becomes

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only one of the requirements and at the same time one of the aims for man's maximum adjustment to the demands of our society. If we are to help man in his complex inter-relation with our society, we have to help him keep a sound mind in the best possible way.

Our effort to overcome the objectivist definition of mental hygiene, and to combine mental hygiene with common practice in building socialism is obviously threatened with the danger of its merger with socialist education, whether the school or sources other than school teach the principles of science, work skills and habits and especially our moral political education and the basic political and economic measures undertaken and to be undertaken by our society in all phases of our life, has at the same time a far-reaching influence on our people's state of mind. After all, the highest aim of socialism is the growth of material prosperity of the worker and his intellectual development.

The socialist definition of mental hygiene cannot be understood outside of the questions of ethics, world outlook, politics, economics, etc.; simply outside of everything that helps to create a healthy relationship between the needs and views of the individual and society and the proper direction of its development. To say the least, our daily experiences convince us that socialist convictions, morality, etc., i.e., principally the make-up of man's consciousness apart from relatively most favorable social and economic way of life are always enough to adjust man to the demands of our society. The make-up of a man's consciousness characterizes the overall pattern of his interests, his attitudes, views and values, and his relation to various phenomena, especially social ones. Practical approach, however, is not merely the problem of a position, values, tendencies and motives.

Man's reactions are the result of the mutual activities of external and inner forces and conditions. The internal conditions are stimulated by external forces which are in predominance over the inner forces and capable of decisions. The most important inner forces and conditions (internal factors that regulate reactions) have both a subjective side (certain conviction, certain needs and certain aims set by man, etc.) and a formal dynamic side. The subjective side includes the synthetic and on the whole the relatively static concepts of empirical psychology. The physiology of higher nervous activity has directed itself predominantly to the formal dynamic side of regulating the inner agents. The present ideas on the dynamics of the nervous processes, as established by the physiological concept of higher nervous

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activity, are far from sufficient to the understanding of the formal dynamic side of the complex phenomena of man's psyche and his behavior. Such regularities as irradiation, the concentration or induction of nerve processes, etc., still in their elementary state, must be almost immaterial to psychology since they are unable to rid themselves of the static quality of the old descriptive psychology. Through close cooperation between psychology and physiology of higher nervous activity we must strive to reach in the shortest time possible such complex physiological and especially psychological, formal dynamic principles that would contain both subjective and descriptive material.

There is no doubt that man's activities within a certain social context are greatly important from the point of view of mental hygiene. It is well known that the make-up of the inner regulatory factors (as, for example, the character of aims that man sets up for himself, and such) exerts great influence on the dynamics of human reaction. It may even seem that the effects of this phenomenon are often so over-estimated that the formal dynamic side of these factors would not even merit special attention and concern. At the same time, this problem is simplified to mean great aims, high self-consciousness, responsibility and others that could exert nothing but positive influence. The make-up of man's consciousness that represents a whole line of the orientation of his activities is the problem of his upbringing in the broadest sense possible. The upbringing produces certain convictions in man, certain moral and political tendencies, etc., i.e., primarily the make-up of the inner regulatory factors. However, it has so far neglected the formal dynamic aspect. It is just this dynamic side of the process of inner reactions which in the long run determines whether the activity controlled by man's general tendencies runs smoothly, without any unnecessary "inner conflicts," whether they have maximum coordination, etc., which has a far-reaching influence on man's overall productivity and the results of his effort.

Daily experience teaches us that various mental disturbances, bad conditions, etc., have considerable influence on the degree of utilization of man's overall potentiality. In the area of inner coordination of reaction dynamics we generally encounter objectively (socially and individually) malicious and binding incentives that incite almost identical intensive reactions and that as a result of such lack of balance, the important is ignored on behalf of the trivial. Important reactions are out of proportion with the trivial ones, aimless fluctuation of mental processes or the anticipation of activities which are out of place

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for a given occasion, that is represented by the exhausting conflicting situation and inattentiveness, cause interference and decrease productivity and damage the rhythm of the alternation between work and rest, etc. When the dynamics of the inner coordinating forces are disturbed while inner motor impulses are under examination (especially as a result of haste, frustration or the stopping of all activity), man reaches an inner "slack" that produces the feeling of overwork under relatively undemanding conditions, the inability to rid oneself of inner tension, an overall aversion to external demands for a reaction. Thus a gradual weakening of the integrating forces of personality and finally pathological changes are produced. Those are some problems that clearly show that the maximum use of force in the direction indicated by upbringing also presupposes the maximum order of the dynamic side of the course of human reactions.

It seems to me that in our country mental hygiene as opposed to other disciplines that deal with man's maximum adjustment to the demands of our society, should have its rational place in the field of dynamics of inner regulatory factors. Such measures can be concerned both with the make-up and arrangement of the external conditions of man's life and the problem of the self-regulation of his mental state. All measures dealing with mental hygiene must be at the same time understood to be an integral part of socialist education and must harmonize with the needs of our society. It is not possible to reduce the problems of mental health to the prophylaxis of mental illnesses, i.e., that mental health should not ask: "What should man do to avoid mental disorders?" The basic motivation of socialist mental health programs should be to answer this question: "How should man regulate the existence and activity of his mind so that his work is most effective and loss of strength at its minimum, so that he can live in harmony with the principle of the socialist world outlook and with the demands of our society and can be healthy and subjectively happy?"

The principal concern of mental hygiene should therefore be viewed primarily within the broad circle of the problems of labor and labor relations. Work is the main concern of man's existence and the measure of all important social and individual values of life whether material or spiritual. These values, and the work process itself certainly have a decisive influence on man's health. In the relationship between man's mental health and his work, his work plays the leading and active role. One should not presume that mental hygiene's orientation

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toward man's activity like work means the neglect of his mental health. Such an objection would be valid only if the increase of the effectiveness of man's work were considered as a blessing of man's health. However, the ways that lower the tangible aim and are incompatible with its socialist and communist theory are absolutely unacceptable to us. Under the capitalistic asocial practice, concern about health depends on whether it is in harmony or quarrel with the increase of capitalist gains. The bourgeois concept of mental hygiene cannot therefore be directed toward the problems of increasing work output. This is a problem of bourgeois psychology.

It can be deduced from the cited excerpt that mental hygiene should have the closest collaboration with psychology, applied primarily to economics, to the physiology of work and to the problems of preventing neuroses and pedagogy. Special attention should be paid to a closer analysis of the relationships between mental hygiene and psychology and the physiology of work. Psychology and physiology of work concern the increase of work productivity and employee care and are generally the results of theoretical and partially of applied scientific and experimental problems. The same aim is pursued by other presentations of political ideas carried out in socialist lands by the communist parties, other social organization and state institutions. It is therefore not useless to keep striving for the development of a further discipline that will also help to increase man's output. I think that this effort is absolutely justified because the dissemination of political ideas and psychology with the physiology of work do not touch upon a number of important problems out of the immediate complex of human causes and conditions of increasing work output.

The dissemination of political ideas insures the motivating side that increases work productivity, whereas psychology and physiology of work follow the increase of work output, from the psychological, organizational and physiological organizational points of view (selection, sorting, preparation of cadres, physiological and psychological problems of the maximum utilization of work areas and work process in relation to the demands of advanced technology, the problems of work safety, psychological problems of the relations between people at work, etc.) Mental hygiene is then called in only to help regulate man's dynamic psychological coordinating forces and can have a significant influence on the effect of all external influences that may affect the individual. Along with the make-up of man's mind, which is the prevalent side, the actual psycho-physiological condition of man

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represents that inner "base" upon which external influences fall. The dynamic psycho-physiological conditions are the result of man's external activity (for example, its success or failure), especially social influences but also his inner organism. A valuable asset to the present neurophysiological ideas on the mechanics of psycho-physiological dynamics seems to be the work on the activity of reticular formation of the brain....

Psychological and neurophysiological laws that deal primarily with the formal dynamic side of man's reactions (dealt with only in connection with their make-up) should determine the principles of mental hygiene's approach to the problems of increasing the effectiveness of man's work. The laws of dynamics of the psychophysiological state can be treated both directly and indirectly. The indirect treatment assumes certain measures in the external environment which in return will have a favorable effect on the dynamic side of men's reaction. In this case we are primarily concerned with organizational measures that protect the maximum rhythm of an activity or a regular supply and coordination of duties, measures for the liquidation of undesirable disturbing influences, the elimination of excessive physical exhaustion and the elimination of disorders in the alternation between work and rest, external measure to maintain the maximum level of stimulation of the nervous system, etc. The external mental hygiene measures are closely related to definite areas of psychology and physiology. These disciplines are not as closely related to the problems of direct regulation of the dynamics of psycho-physiological conditions.

The most frequent example of a direct regulation of the dynamics of psycho-physiological conditions (mental hygienic self-regulation) is physical exercise. Kinesthetic impulses, as we know, heighten the tonicity of the crust of the front brain hemisphere. The maximum dosage of a general physical exertion improves the functioning of the motor analyzer, benefits man's overall mental activity and the quality of the inner coordination of his reactions. I. P. Pavlov called the influence of the muscular movement the "muscle sensation." "Muscle sensation" and the generally increased "organic" self-consciousness or feebleness are very valuable phenomena for mental hygiene. The dynamic side of man's reactions can also be influenced by specialized self-regulatory techniques whose extraordinary effect in my opinion only the future will show. Certain results were already achieved by some methods that however need to be analyzed and criticized from the point of view of Marxist science, liberated

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of their idealistic bias, subjected to a thorough practical examination, their positive features adopted and at the same time there is need of experimentation with new techniques that could prove practical. I am primarily thinking of relaxation techniques and the so-called autogenic training of J. H. Schultze, and possibly the technical moments of some exotic methods of auto-regulation (yoga).

The auto-regulation of the dynamic side of man's reactions should not be understood only as a periodical intervention of a certain auto-regulatory technique. The establishment and maintenance of the inner dynamic "equilibrium" should rather be the concern of general self-control and regulations where it nevertheless seems an extra phenomenon, yet at the same time an integral part of a conscious solution of inner forces necessary for a successful attainment of set aims. It is the problem of a definite regime or a "style" of mental existence in which the content and dynamic sides are in complete harmony. The mental hygienic aspects of relations should more or less penetrate all activities, even extra curricular ones, and private family life.

The man of our historic epoch has learned how to master the infinite forces of nature and society. The intentional transformation of the external natural and social environment continually creates more perfected conditions for his life whether observed from the material or intellectual points of view. Mental hygiene is one of those fields that is supposed to strive to see that man's inner psychic and neuro-physiological environment would have less and less accidental events that could hinder the successful attainment of his aims and his happiness.

Author's address: 7 Psychology-Philosophy Faculty,  
KU, Londynska 39, Praha 12

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THE NATURE OF PSYCHIATRY:  
A SOCIAL OR A NATURAL SCIENCE?

Following is the translation of an article  
by Oldrich Vinar in Activitas Nervosa Superior,  
Vol II, No 4, Prague, 1960, pages 452-457.

The question posed in the title is basically a question of the biological and social relationship in psychiatry and in the last few years a lot of attention was paid to it. Among other things the Psychiatric Association's ideological convention held in May 1959 in Zeliva discussed this problem. The following text partially supplements the discussion sponsored by the Philosophical Faculty of the CSAV (Ceskoslovenska Academie Ved -- Czechoslovak Academy of Sciences) on the basis of J. Cvekla's article of January 25, 1960 on the one hand and the discussion within the philosophical circle of the Society for the Study of Higher Nervous Activity in February and April 1960.

The answer to the question posed in the title could be very simple: Psychiatry lies on the crossroads of social and natural sciences. That is no longer a question today and therefore it seems natural that the problem is approached from several multidimensional aspects. What remains to be a question is on what basis is it possible to compare the results of this aspectual method and which approach is to be the dominant one. It is certain that each individual case needs a different approach. It would not be entirely fair, however, to use a predominantly socio-scientific approach on psychogenetic disturbances and the biological approach with organic disturbances.

How is this problem solved by idealistic psychiatry? K. Schneider can serve as an example. According to him, psychiatry includes two heterogenous areas and rests on two pillars: On somatology and psychopathology. It tries to put both of these areas under one roof. According to Schneider, this attempt is a philosophical undertaking in itself because it includes both the problems of the soul and the body. Whenever the psychiatrist tries to find a connection between body and soul, each one of his steps is metaphysical. The unity of the psycho-physical being is a metaphysical phenomenon. It occupies the central position in psychiatric problems and is decisive to the solution of every psychiatric question. In reality, therefore, psychiatry is metaphysics.

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To Schneider, therefore, psychiatry is neither a biological nor a social science. To him it is simply philosophy. Schneider's example shows us at the same time that in trying to find an appropriate place for psychiatry, one cannot avoid the question of physiological and psychological relationship. That can be solved either from the ontological or gnoseological points of view. The materialistic monism cannot ontologically permit another opinion than the one that psychotic activity is nothing more than an objective process of the nervous system in the brain. The definition "psychotic activity is a nervous process" is then ontologically valid. The definition, however, cannot be enlarged to include the idea that every nervous process may not be psychotic. More accurately, therefore, psychotic activity is a special factor of the nervous process. It can be nothing more. We would have to ask, what is this "more," is it something tangible, but we would only end in dualism.

It would seem that such an evaluation of the nervous process and psychic activity eliminates the differences among the various qualities of mass movement, that it reduces the highest quality of movement -- the psychotic one. This question can be approached from various points of view. Various criteria can be set up and according to them one may then look for various psychotic characteristics, whichever are most pronounced. As far as we are concerned, we shall make a qualitative jump and presume that man lives through his psychotic activity subjectively and in a peculiar way. Not only does a man think, but he also knows that he is thinking and is able to observe himself during this activity. What basis of our knowledge that man has this ability? The basis is speech, the ability to communicate by means of signals what he is experiencing. Here is the beginning and the end of all the hypotheses on the psychotic activity of animals. Why argue whether animals live somewhat as subjectively as man when they are unable to formulate this subjective existence by means of other signals, cannot tell us about it, are unable to communicate. This is the reason that speech is the basic symbol of the sine qua non of the psyche. Do we have a certain physiological basis for speech or can it be interpreted only in a psychological concept? Pavlov's teachings on the other signal system that is still further developed is a sufficient basis for our insistence that neuro-physiology is able to explain the existence of speech already established (through its concepts and laws). If, however, then, of course, we cannot ignore social factors, methods of production, etc., as the decisive actors.

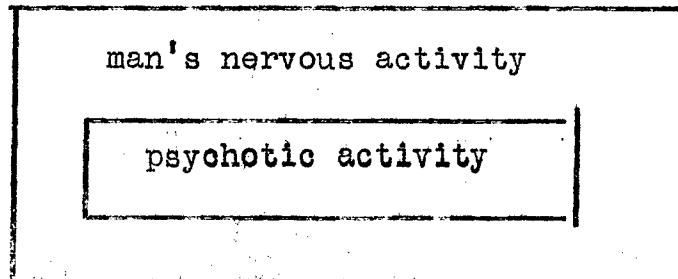
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Speech, or better yet, the Second Signal System, is a necessary basis for man's psychotic activity and methodologically speaking -- since it is the principal instrument of communication -- it is necessary to the attainment of that qualitative peculiarity, that psychotic uniqueness that is experienced by a special subjective process. In my opinion, physiology is unable to give a satisfactory answer to the question whether speech by itself is a sufficient explanation of whether higher nervous activity actually exists. Here we perhaps finally come in contact with laws higher than physiological ones. Here is a dialectic jump to a higher quality of motion, to the motion of matter and here finally begins that which should distinguish psychology from physiology, the searching for specific psychological laws within this enormously rich region of the subjective existence. Psychologists sometimes do not recognize this because they fear that they may be called subjectivists or introspectionists. Introspection, however, is not the only way to study this region -- only a solecistic idealist can look at it that way. He can study the psyche of another man -- or his own -- on the basis of his observations of himself and of what is happening around him and compare it with his behavior and with whatever I am able to say about it. The American Behavior Science looks at this problem differently. For them even speech is one of the evidences of behavior and they include physiology as well as psychology and sociology in behavior science.

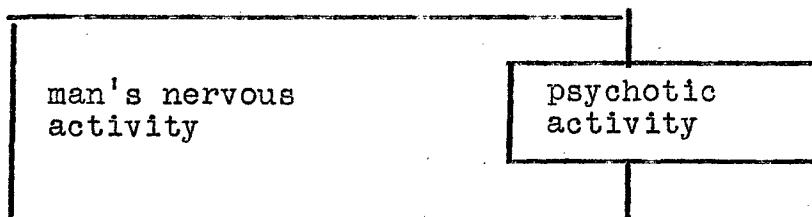
From the ontological point of view, the recognition of the identity of the physiological process and psychotic activity with the fact that the nervous process becomes psychotic. At the moment something can be said about it in words or other signals, showing what feeling the subject has and does not automatically presume that in psychology everything subjective is therefore unscientific. This subjective phenomenon becomes objective when expressed in words which can be scientifically examined. O. P. Pavlov spoke about the "individualistic reproduction of nervous processes in a subjective world" when distinguishing between physiological and psychological phenomena. Pavlov says that psychological refers to that which is the "inner, subjective side of the nervous structure and function of the human brain" -- "it is harmful to ignore the subjective side of the nervous physiological phenomena, it could lead to the liquidation of psychology." One can agree with that, but it is necessary to explain what is meant by that "inner subjective side" of the nervous function, when at another place

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Todor Pavlov defends the identification of the nervous and psychotic activity. Here, however, the definition does not go as far as to say that each nervous activity is not psychotic, but that there is other psychotic activity than the one that is identical with a part of the nervous activity:



It is inconceivable that psychotic activity would surpass the scope of higher nervous activity:



In Todor Pavlov's concept, the subjective inner side of a nervous activity cannot be torn away from nervous activity. He then insisted that on the basis of his one-sided intensification of one side, a balance between the nervous process and psychotic activity cannot be made. There is a need of a clear definition. Psychotic activity is a nervous process of which the subject can inform us in words or other signals (which is the best proof that the subject exists).

The assertion that psychosis is definitely a part of nervous activity is as unfortunate as the idea that thought and psychoses are products of the brain. That can create an illusion that this product after it has been produced can exist without its creator, outside of nervous activity and independently of it, just as product exists independently of man and machine that made it and just as a gall bladder exists independently of the liver.

The identification of the psyche with the nervous process does not oppose the use of the historical point

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of view: Man's higher nervous activity is created by his relationship with the outside environment, with work, with the establishment of social contacts of individuals. New conditions call for more complex and more dynamic activity of the nervous system and in order that the nervous system can carry out its duties there needs to be conscious reactions. Man's brain is not only a biological product, but also a socio-historical one and is subject to the physiological principle that the function creates the organ.

It is related to the question whether psychosis is material or ideal. Psychosis can be idealistic only from the gnoseological point of view. Only in the theory of recognition can it be an antithesis of matter. In ontology and only from the onological point of view, I said so far, is psychosis a physical process.

If we define psychosis as an exclusively nervous process that is experienced subjectively, we still do not have an answer to the question what determines the course of this process. Is it the structure of the brain and the physiological laws or is it other laws, and are they psychological or social? Daily experience shows us that psychosis is determined both biologically and socially. What is the relationship between these determining factors?

It seems to me that one of the basic views of this relationship can be seen this way. There is the same relationship between social and biological as between the categories of form and content. It is true that this relationship can be also observed through other relations and the relationship between form and content does not have to exhaust all of the sides of biological and social interactions in an effort to determine the psyche. Other opinions also come to view (the relationship between the reason and the deed -- Menert; relationship between the general and the specific -- Holas, etc.), but in my opinion, however, the use of these various viewpoints is not mutually exclusive. The content can be the reason for the form, the accumulation of positive temporal, identical or special cases can lead to the formation of a new basis form, etc. The nervous process is a form of psychotic activity, its content is then the reflection of its external reality, the content of our consciousness. And one can further apply to this particular case everything we know about the relationship between form and content in general.

The contents of consciousness -- that which is reflected -- determine the quality of the psychosis. The nervous process is then the form, the means of

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existence of this content, it permits its existence. Together they form a unit in which one is incomprehensible without the other. At the same time, there is a dialectic relationship between them. There can be disturbances between the contents of the psychosis and the nervous process and through the elimination of these disturbances we arrive at a new development: Progress. As a form, the nervous process either helps to develop the content or holds it back. Even here the form is more stable, more conservative and less mobile. Such stability of the nervous substrate and dynamics is obviously disrupted by the inconstancy of the psychotic content. Even here the disorder is worked by a struggle, the result of which is further development. Content is a decisive factor because it determines its form. The rule that content and form are not frozen and can influence each other is true even here. The nervous process as a function of the nervous system is the content of the brain's morphological structure. The nervous process is a form of a reflection of this process. The struggle between nervous process as a form and the content of the reflected, contributed to the rise of the Second Signal System. The content called for a new form. Even here we see the effects of a law that states that function creates its own organ see note 7.

(Note 7) The content and form of psychosis can be observed from other sides also. So, for example, thought has its own form and content. Effect also has its own content and form. Here one is even able to look for variously localized structures within the central nervous system in which there is a determination of content and form of the effect. Above all, content is determined on the basis of the convexness of hemispheres and the form of expression by the limbic structures.)

The contents of psychosis are not exclusively the reflection of man's social environment. The reflection of the biological environment also belongs here and should include not only external but also the inner environment of the organism where the reflection is realized by intercession. It is certain that this biological determination of the contents of psychosis is very important. With certain exceptions one can even include personal instinct here. Nevertheless, we know that social reality is the decisive, and, for man, the typical content of his psyche.

Here the absolutization of form leads to a biological reductionism in psychiatry and absolutization of the content leads to sociological reductionism.

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Let's try to be more concrete in psychiatry and see more of applied psychiatry. The content of the morbid psyche does not correspond to objective reality. The psycho and the neurotic sees the world in a different, tinted light. What causes this tinting? This question can be easily answered where the morphological structure of the brain has been pathologically changed or where its metabolism has been disturbed. This even leads to the changed function of the brain. The nervous processes are therefore also pathological and the form then leads to the deformation of the psychotic contents. Such crude deformations are blunders, hallucinations and illusions. But not even this presents anything new, content-wise, even this pathological psychosis has its sole content determined by the function of the reflection, even though it is biased. Not even here can the content of blunders and hallucinations be anything else than deformed experiences of the mental patient, his colored reminiscences, and such. Even this pathological content is nevertheless formed first of all from social relationships because the relationships between people are the main aspects of external reality that our nervous system reflects. It is absurd to think that a certain germ -- perhaps in infectious psychosis -- would be able to determine the contents of a pathological psychosis. It is again only the experiences of the patient, whether past or present, that give content to the pathological form, to the blunder, illusion or hallucination. It is then permissible to study psychopathology with this in mind, perhaps even progressive paralysis because it could hardly be accidental that one paralytic thinks he is a king and gives out hundreds of automobiles, and the other blames himself for causing the Second World War and asks for the harshest punishment and torture. And it cannot be purely accidental that even 20-30 years ago paralytics were on the whole megalomaniacs and happy and today they are rather micromaniacs and sad when the type of infection and the biological pathogenesis remain unchanged.

Everything that in psychiatry is indicated as psychogenesis deals with the causal content of the consciousness, it makes up the content of the psychosis. If we speak of psychogenic disturbances, it means that it is primarily the content that produces pathological conditions.

The pathological state could be reached by a certain conflict in the contents: There is a conflict between that which pertained to the content of the psyche up to this time and between that which is now actually reflected in a new way. Here an important role could also be played by the conflict between the biologically determined content of the psychosis and the actually reflected social

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reality. Then the nervous processes are unable to carry this impact of their content, the content disturbs the form, there is an overexertion of the nervous processes and the break-down of higher nervous activity. The content itself is not pathological, pathological state, illness and neurosis occur only when the form, the nervous process is disturbed. From this moment the further development of the psychosis is determined more by its form than its content. And it can generally be said that the characteristic of the psychotic activity of a healthy man is the fact that it is determined primarily by the content and the characteristics of the sick man's psychosis are determined principally by its form. The other non-psychogenic psychoses are primarily concerned with form. There is either a humeral or a morphological disturbance of nervous processes and the content is affected only secondarily. This content is however deformed by the nervous process and not created in a historically genetic manner. It must again be the reflection of the outward appearance whether a past reminiscence or an image, and such. Here the psychiatrist speaks of the pathoplasticity of psychotic phenomena and employs the socio-historical approach to the study of organic or according to some concepts even the so-called endogenic psychotic disorders.

A brain tumor presents a simple situation. Here the changed morphological structure also produces a change in the nervous process and we can see a pathological form of psychosis. This form in turn disturbs the content. The localization of the tumor can merely pre-determine the form of psychotic phenomena. A tumor in the vicinity of the eye can lead to elementary sight hallucinations, a tumor in the sensory regions leads to hallucinations of smell. The content of the absorbed material cannot contain other elements but those once acquired by an extero- or interoreceptive way. Here is also an evidence of the nihil est in intellectu quod non erat in sensu, even though this content is deformed and twisted and composed of elements that do not belong to each other and are inadequate stimuli, and such.

That branch of psychiatry specializing in neuroses is faced with a different situation. If we believe that neurosis is a psychogenic disorder, then the most common causes of a neurosis are specific aspects of contacts and conflicts among people. Here the content of the disturbed psyche is socially determined but the social factor is mainly the cause of the pathological form and the cause of the disturbance of the nervous processes. The process of reflection is also disturbed. Not even the neurotic can see and adequately evaluate objective

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reality and his presence in it, he underestimates or overestimates himself, has illusions about certain social realities, incorrectly generalizes on the basis of little experience when he cannot effectively reconcile himself with his experiences and such. The reflection process is however disturbed because there was a disorder -- even though only functional -- of the substratum that allows the reflection, i.e., there was a functional disorder of the brain. The psychotic trauma is the cause of unhealthy behavior just like the infectious tumor or a germ is the cause of an infectious disease. Besides that, the particular social behavior contains a changed psychotic stage and this may happen even though there is a lack of any psychogenic cause. That is true for all mental disorders and not just for peculiar psychogenic disorders. If we disregard this fact, we can make use of this analogy: The study of interpersonal social relationships is just as important to the study of neuroses as the study of bacteriology and epidemiology are important for research on infectious diseases. Just as the role of the microbe is not finished after it evokes a disease but shares further in the development of the disease, so the individual that remains in the infected environment can be reinfected, his immunologic reaction is subjected to a change, allergy and similar things may arise and so not even the role of the psychotic trauma nor perhaps a conflict can be exhausted after it causes a neurosis. And as the medicine of infection is not exhausted by bacteriology and epidemiology, the study of neurosis is not exhausted by the study of social relationships. And as bacteriology and epidemiology are important especially to treatment, so the study of social relationships is important to the treatment of neurosis. But not even the cessante cause cessat morbus can automatically be applied to infectious diseases.

Beranek and Prenosil consider the social standards to be determining factors of man's reflectory process, yet they fail to mention how they imagine this determination, especially when they insist that the physiology of higher nervous activity establishes the laws of natural mechanisms which reflect reality in man's mind. It means perhaps that next to the natural mechanism there is still another social mechanism that produces reflections. What is this mechanism -- if it is not a natural one -- and what are its social mores?

A different view is represented by Bykov who defends the thesis that subjective reflection is created and exists according to the laws of the higher nervous activity. To this one must add -- as Cvekl also indicates -- that

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even the laws of higher nervous activity do not reflect the external habitat and as far as the reflections of laws of society are concerned, they took over the laws of social relationships. Then the laws of the society and the neuro-physiological ones would not be identical /see note/.

(Note) Such a concept is nonsensical, as may seem, as we can see through the study of cybernetics that tries to seek such new general concepts that would include both real and unreal matter, the psyche and the society that in the end only confirm the material unity of the world. The human brain matter cannot, even during the reflection process, be subjected to basically foreign concepts other than those belonging to the rest of the material world. If we consider things under this light, we of course risk the possibility of liquidating the qualitative characteristics of the various forms of matter motivation. Since that which pertains to lower forms of matter motivation is included on a higher level of quality in the higher forms of matter motivation and does not work in reverse, then cybernetics, in formulating its general laws for both real and unreal matter reduces the higher form of motivation to a lower one and even down to the lowest level, the physical one. In my opinion the biggest drawback of a particular concept of cybernetics is that it investigates only quantitative relationships.)

According to Cvekl, there are two possible alternatives in the effort to determine the share of society and biology in the study of neuroses: Either the disorder is in a particular social relationship and is reflected by a distorted psychosis or it is in nervous processes of the individual. In the first example, neurosis is a psychopathological expression of inadequate social contents and the aim of therapy to change the "patient's psychotic and nervous processes so that he himself is able to eliminate the pathogenic factors from his social relationships" (cited from Cvekl).

In this first alternative, Cvekl is developing the thesis that neurosis is an illness of social relationships and therefore social relationship rather than the individual is ill and man only reflects this unhealthy relationship by his psychosis. The unhealthy social relationship -- as far as one is able to talk about it and not just be dealing with a metaphor -- can be nothing more than the consequence of a sick individual (or individuals); an unhealthy relationship in the medical sense of the word cannot develop among healthy people. That which is pathological cannot be transplanted from the head of one individual; man may be ill but his relationships cannot be. A certain strained relationship among

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people and conflict not malignant in itself -- it can be pathogenic -- may be as pathogenic as a microbe. But since a microbe cannot be "ill", so the relationship cannot be unhealthy either. A pathogenic conflict can only lead to an illness and then the neurotic as a consequence of his neurosis creates other conflicts and only these secondary conflicts can from a certain point of view be called unhealthy because they are the cause of an illness. The first infectious conflict, however, cannot be called infectious. This, however, does not prove that these secondary "infectious" relationships are not the motor which nurtures the pattern of a neurosis and may affect people who come in contact with the neurotic.

Not even Cvekl's second alternative is plausible. It states that disease lies primarily in the individual's nervous processes. That would really be psychopathy and not neurosis. A permanent malignant neurosis is only the result of the combination of the brain and pathogenesis. Nervous processes have the ability to reflect certain facets of life and this process in itself is the cause of its own neurosis. Nervous processes are unable to cope with a situation, they are over-strained, higher nervous activity is disrupted and gives rise to neurosis. The analogy is in the rise of an infectious disease. Even though microbes are pathogenic, they will cause an illness only when the person is disposed toward them. If the organism does not destroy the microbes as soon as they penetrate the organism, illness will occur only as the individual's reaction to the intruder. The matter itself is not as yet "malignant." The organism itself is then able to support the malignancy within itself as is the probable case with certain virus infections. Here we can once more see analogy in the neurotic who creates further conflicting situations, however, only after the first, primary conflict has evoked the neurosis.

What is the treatment? Here pathophysiology gives us good suggestions as to how to change nervous processes by humoris or pharmacological means. We are therefore able to change the form within which only psychosis can exist. And we know from experience that today's psychiatrist can do that very successfully. He is able to evoke an experimental psychotic alteration in a healthy individual and within a few minutes he can suppress it. He can very quickly suppress an acute psychotic disorder, blow the wind from the sea of blunders and hallucinations, lead a jolly maniac into depression and the depressed patient as far as submania. At all times we are changing the form of the psychosis and its content is changed

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indirectly through its transformation which is quite commonly unsuccessful, especially in neuroses. The only way we are able to change the psychotic content of a mental patient is by changing his environment and making his nervous system dependent on other nervous impulses and letting him reflect something other than what he had reflected up to that time. The most effective impulse that is capable of changing the psychotic content is the doctor's word, i.e., psychotherapy. But it is also true in this case that if the content can be changed this particular way, then even the form can undergo a change and the very state of nervous processes can be influenced.

The remaining question is how can the psychotic content be presented from a physiological point of view. In an attempt to answer this question, the most significant thing is that all our discussion up to this point stemmed rather from the effort to find differences and conflicts between the form and content, between that which is reflected by the nervous process and paid very little attention to the other side of the matter, the fact that content and form make up an indivisible unit. From the physiological point of view the contents of psychosis cannot consist of anything else but a definite decomposition of excitability and suppression, their extent and intensity in the various parts of the brain, primarily in the brain tissue whether it be static or dynamic, and by their process and variety. Penfield's experiments with the electric stimulation of the temporal lobe tissue of epileptics have shown how such a completely artificial and unnatural intervention evokes certain psychotic contents that are stored in stimulated areas and owe their origin to the patient's surroundings -- i.e., they evoke his former experiences.

The course of a normal individual's psychosis, or, in other words, the psychosis of a healthy individual is in the first place determined by its content, and that is mainly on the social level. The psychosis of the mental patient is also based on a "social order" (Dobias), by its content it is a social phenomenon in which the patient lived. The psychiatrist is interested in its pathological aspects, i.e., diseased nervous processes, but the form in which psychotic content can be present is changed.

Up to a certain point the idea that pathology occurs when form dominates over the content and that the form therefore becomes a decisive aspect of the content is correct. The conflict between the content and form can be decided in favor of the form. And if nervous activity is considered as its form, then neurophysiology must remain

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to be the basis of psychiatry. Even though we have no desire to deny that psychiatry lies on the crossroad of bio-social and natural sciences, it is still closer to biology. Psychology, on the other hand, that is concerned with the healthy psyche from a specific viewpoint, is among the sciences that are both biological and social, and is closer to the social ones than psychiatry because there the content determines the form. Of course, only up to the point the dialectic between the content and form permits.

This can be explained by the fact that the psychologizing psychiatrists are in danger of using the reductionistic sociological approach while the physiologizing psychiatrists follow the approach of biological reductionism. It seems to me that the first reductionist form is the more dangerous one to the development of psychiatry as a science.

Conclusion

Psychiatry lies on the crossroads of biological and natural sciences and has a multidimensional approach. Mental activity has to be approached from the ontological point of view as a special case of nervous activity that unlike the other higher nervous activity is characterized by the existence of the Secondary Signal System that allows that which is subjectively experienced to be known.

Psychiatry may look upon the relation between the biological and social in the same way as on the relationship between form and content. The nervous process is the form which allows the existence of what our consciousness first of all reflects as the contents, the social reality that is the content of this form. A conflict may arise between the content and form even though they form an indivisible unit. In phylogenesis conflicts are treated in favor of the content, it is some point of a rule that function makes its own organ. In psychiatry, the absolutization of form leads to a biological reductionism, the absolutization of the content leads to a sociological reductionism.

The healthy psyche is characterized by the fact that its form is determined by the content, and in pathological psychosis, it is determined by the form. Since psychiatry is primarily concerned with the morbid psyche, it is closer to biological sciences, whereas psychology is closer to social sciences because it deals with the psyche of a healthy person.

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THE RELATIONSHIP BETWEEN  
THE BIOLOGICAL AND THE SOCIAL IN PSYCHIATRY

[Following is the translation of an article by Jiri Cvekl in Activitas Nervosa Superior, Vol II, No 4, Prague, 1960, pages 458-459.]

Among materialistically oriented psychiatrists, psychologists and philosophers there is basic unity of agreement on this question. In the first place, in psychiatry the biological aspects need to be joined with the social ones and therefore the biological methods need to be joined with the socio-scientific ones. In the second place, the growth and development of psychosis is just as much biological as it is social and the main moving force of the development are social factors. In the third place, in the ethiology of neuroses as in psychogenic disorders, social and especially interpersonal relationships play a decisive role which is greatly significant both for therapy and preventive measure.

Let us examine two of the controversial questions, the concept of the society and the concept of the individual.

1. In closer analysis, social causes are divided into those that in the broad sense are connected with society, its social organization and order, the relationship among groups and classes, the basic socio-economic relations and those interpersonal processes and factors that are characterized by the direct influence of one individual upon another and direct relationship as especially of small social groups. The argument is centered around the question whether the causes of psychogenic disorders are first of all social causes in the broadest sense of the word or interpersonal relationships. The marxistically oriented psychiatrists tend to lean toward the first variety, the others (especially those who support the so-called social psychiatry) to the other variety.

An outlet can be found in the concept of the connection between social and interpersonal relationships. Social contacts are the basic ones and after all the decisive ones, even though they work through interpersonal relationships. In the ethiology of neuroses those personal interrelationships that are connected with the

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individual's important daily needs and thus are subject to regulations by the society appear to be causes of disorders. That explains why the socially evoked disorder at the end affects even the biological needs and can be reflected in somatic functional disorders.

2. In health or in sickness the individual can be approached in an abstract, analytical and generally synthetic way. The danger of the abstract analytical approach rests in the absolutization of some partially specialized aspect (for example, biological, physiological, psychological, social and gnozeological). The danger of the synthetic approach is in the superficiality and a simple enumeration of various aspects.

In my opinion the proper approach is the one which states that psychotic disorders, even though their man substratum is the central nervous system, are the disorders of the whole individual both in the sense of complexity and mansidedness of the human personality and in the sense of the relation to the objective world, and demands of external forces. The disease is as complicated as its bearer. The individual reacts to his surroundings not only as an organism but also as a being that has conscience and as the subject of a social order. Therefore, the analogy between ethiology and pathogenesis of infectious diseases and the ethiology and pathogenesis of psychogenic diseases can at the most express what they have in common and not that distinguishes psychogenetic disorders. These differences are already visible in the difference between structure and function of the nervous system as opposed to the other organic systems, furthermore, infection is caused by the mutual action of blind factors whereas psychogenetic disorders deal with the mutual contact of individuals who act, think, and feel and finally, man has a different effect on his environment than an animal, he is capable of transforming it actively.

The individual is provided and prepared to cope with his social environment, i.e., both biologically and socially (morally, spiritually, especially as a result of his education in the broadest sense of the word). The so-called emotional stability, as an agent preventing psychogenic disorders, is a complex mass, the combination of inborn characteristic of the nervous system, the actual state of the organism, personality structure, social situation, moral level, and such.

The question is how are we to imagine the mechanism by which social pressures are reflected on the individual during a psychogenetic infection. The model presented by O. Vinar would look something like this: In the

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beginning there is the important social interpersonal conflict outside of the personality and outside of the physiological and pathological differences. Social conflict has nothing to do with a pathological one, it can only become pathogenic. That is followed by the individual's psychotic reaction which is out of proportion. In the third phase there is a failure of the neuro-psychotic processes, a "break-down", and the pathological state of the brain.

It is my opinion that this model is oversimplified. Social conflicts cannot occur outside of the individual because the individual himself is an element in them from the very beginning. The problem here is the relationship between people where the improper reactions on the part of one individual evoke improper reactions on the part of another individual and support each other mutually. Generalization creates an abnormal personality that in turn is responsible for further disorders. The pathologically changed course of the nervous system produces deformed social relationships and conversely. One has to realize that society does not exist only outside of the individual but also within him, and that the social process does not end there where the activity of the receptors begins or outside of the human body. It is a well-known fact that Marx, in contrast to naturalistic anthropologism, defined personality by a system of combinations of social relationships.

On the one hand, social causes are outside of physiological and pathological contrasts, but on the other hand, social causes are a part of them, as elements of the structure of personality and as aspects of individual consciousness. That which can be seen physiologically as a dynamic stereotype, psychologically is a part of the personality structure, socially a definite moral or political characteristic and gnozeologically the disorder of a recognition and evaluation of objective reality. From another aspect, the function of the brain appears as a certain approach of the individual toward his environment and neurosis is the disturbance of this approach.

The complexity of these processes can be reflected in therapy that is directed toward an actual organ as well as towards its psychotic function and patient's re-education. It is difficult to say at this time which of the indicated types contains the more important mechanism that gives rise to a functional disorder in an individual. It seems logical that it may be somewhere on the border of nervous and psychotic processes and social

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moral and gnozeological characteristics of the subject  
come up as the beneficial or detrimental moment, as the  
case may be.

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SECOND CZECHOSLOVAK NATIONAL  
PSYCHIATRIC CONFERENCE ON MENTAL HYGIENE

[Following is the translation of an unsigned article in Activitas Nervosa Superior, Vol II, No 4, Prague, 1960, pages 466-467.]

The evaluation report of the committee of the Second National Conference of Psychiatrists on "Mental Hygiene," held by the Society for the Study of Higher Nervous Activity and the Czechoslovak Psychological Society. The conference was held 5-8 August 1960 and was attended by about 400 people, among them psychiatrists, psychologists, physiologists, neurologists, hygienists, pedagogs, and workers in other fields. Eleven of the participants came from abroad: Three from Hungary, two from Poland, two from the German Democratic Republic, two from Bulgaria, one from Rumania, and one from the USA.

Dr. Prokupek opened the meeting on behalf of the arrangement committee. Dr. Wunschova greeted the conference on behalf of the Ministry of Health, Prof. Janota spoke for the Czechoslovak Psychiatric Society and at the same time presented Prof. Myslivecek with an honorary membership in the Czechoslovak Medical Society. Docent Symon spoke on behalf of the Society for the Study of Higher Nervous Activity and Prof. Tardy on behalf of the Czechoslovak Psychological Society. A letter of well wishes was sent off to the President of the Republic with a wish for the success of his effort to maintain world peace.

From the point of view of psychiatry and psychology the opening paper dealt with the development and limits of mental hygiene in our socialist society. This comprehensive paper first presented the history of mental hygiene in the world and in our country, with a rich tradition beginning with J. A. Komensky. The basic concepts of mental health and mental hygiene that cannot be divorced from the socio-economic and political problems were further developed, main tasks were enumerated along with a discussion of treatment, supplementary education, cooperation with other fields and the dissemination of appropriate information, and the problem of removing mainly those disorders that occur on a mass scale. In the other papers there was an interesting and inspiring report on

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mental hygiene in the German Democratic Republic. It is necessary to stress the basic meaning of the theoretical paper entitled "Mental Hygiene and the World Outlook" which does much to support those that work partial or concrete problems of mental hygiene. There was also a report on "Mental hygiene and religion." The other group of papers presented the position of mental hygiene from the point of view of medical criteria and psychological problems. On the same day there also were reports on several fields important to mental hygiene, such as psycho-genesis, and on the importance of a proper approach.

The first day, therefore, brought the elucidation of theoretical and conceptual questions from various aspects which need more scrutiny. However, there was not one paper on practical and organizational measures in the field of mental hygiene. It is therefore necessary that the societies in charge present appropriate suggestions in this direction.

Further meetings were taken up by the individual evaluations of the problems of mental hygiene. There should be an encouragement of papers on problems of marital life and family life in early childhood. These unusually important problems have already had suggestions offered to their concrete solution. That was followed by a number of papers on the mental health of school children. It is a pity that there was so little discussion on the problems of mental hygiene in schools. Some papers dealt specifically with mental disorders that follow light children's encephalitis and indicated practical educational and possible preventive measures. The third day was devoted to the important circle of problems of mental hygiene in occupations. The introductory paper was entitled: "Psychotic hygiene within occupational hygiene." This day's program was very valuable because it presented the general approaches of psychiatry and psychology, physiology, higher nervous activity, occupational hygiene and occupational diseases.

Most valuable were those papers that were based on data from actual experiments and research in occupation. This work clearly showed that the near future will be able to utilize some of these results, remove faults and create better technical, personal and organizational conditions. A number of the papers have shown that the systems of individual scientific fields can be successfully used in utilization of the methods used in psychiatry, psychology and physiology of higher nervous activity in occupational hygiene and occupational diseases.

Some of the papers have properly emphasized methodological problems especially by making use of statistics.

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Future papers should devote more attention to a more adequate use of statistical methods.

The last day presented a broad scope of the problems of mental hygiene and so a part of the business was in two sections. There were the various problems of mental hygiene in connection with military service, with an effort to assimilate citizens of gypsy origin, in connection with brigade workers, mental workers, with noise, psychopharmacy, nicotinism, alcoholism, toxicomania, suicide prevention, nutritional factors, etc. This section was also enriched by contributions of our friends from abroad.

The last day also had information on either the results of a particular experiment or a scientific evaluation of the data accumulated by the experiment on the one hand and the work with plausible conclusions although without an effort to examine the ethiological agents and other important facts on the other hand. There may be a certain danger in the approach where certain aspects of mental hygiene carry out broad measures that lack sufficient scientific foundation.

In conclusion we can say that the congress presented a rich variety and breadth of the actual problems of mental hygiene in our country. Nevertheless, the occasion did not pay satisfactory attention to all of the more difficult problems. It is necessary to mention the need for a constant deepening of the ideological and conceptual clarity of the concepts of mental hygiene and a closer cooperation between related fields and mass organization with the identical aims.

The transcendental aspect of mental hygiene demands special evaluation of the various approaches. One needs to emphasize that, for example, very few of the reports dealt with the mental hygienic aspects of personal relationships in the smaller social groups. There was a lack of any experimental work in that entire field. The same is true of the necessity to work on a physiological basis to insure the maximum support of the process of higher nervous functions on a broader scale even though this work has a better place in institutions.

The problems of organization were insufficiently represented at the congress. For example, the introduction and development of the aspects of mental hygiene in Statute No 4, 1956, on the hygienic service and its operational measures, and also in school directives and others. The congress paid little attention to the propagation of mental hygienic principles and the problem of how to get the public at large to participate in a systematic enforcement of mental hygiene in such mass organizations as the Czechoslovak Red Cross, Women's Council and other, as well

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as the movement of people's health workers in the factories.

Governmental administrators both on stage-wise and local levels as well as the Party and departmental functionaries not only are unacquainted with the principles of mental hygiene, but they are not even presented in schools and there is no other education on the basic principles of psychology. The same thing is true for factory directors, labor organizers and goes as far as shop heads and production output directors. All of the medical and school personnel should be far better acquainted with the principles of mental hygiene.

We are of the opinion that in the nearest future and with the greatest amount of earnest some of the most pressing problems of suicide, the rise of incapability to work due to neurosis, criminal tendencies of youth, alcoholism, nicotinism, pharmacophagy and other unpleasant phenomena need a quick solution. Since such great attention is paid to the planning of material progress, to education and medical care, mental health care of our population should not be left to the dogs.

In summary, the Second National Psychiatric Conference is the first of its kind devoted to "Mental Hygiene." The actual work of discussing the matter that is so important to the condition of our state has to be evaluated positively. Even the conference's thematic division was just. Furthermore, it is necessary to stress the intersectionality of this conference that was made possible by the cooperation of the societies involved. Also the selection of the location where the conference was held was very appropriate as well as the entertainment that went along with the conference.

On the negative side it should be observed that some of the lecturers and participants in discussions went beyond their time limit and so we recommend for future conferences to set up a signal system. Furthermore, some of the participants failed to submit a summary of their paper before the congress so that its quality could not be determined beforehand. In the future those who do not submit summaries of the papers in advance, should not be permitted to speak.

In the future it would be much better to lecture on the basis of actual facts and limit theorizing of general character to the minimum, that means, indicate the difference between the text prepared for a lecture and one for publication.

The biggest drawback was the failure of the Prague housing service to provide stationary housing of the out-of-town attendants of the conference.

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In conclusion I can only praise the conference itself and I am convinced that I can speak on behalf of the members of the conference when I express thanks to the arrangement committee led by Dr. Prokupek for the great work they have done.

The Second National Conference with its theme "Mental Hygiene" can be appropriately classed into the World-Wide Mental Health Year Program.

Docent Petran, chairman of the evaluation committee, Dr. Knobloch and Dr. Rektor represented the Czechoslovak Psychiatric Society. The Society for the Study of Higher Nervous Activity was represented by Docent Dobias and Dr. Horvath, and the Czechoslovak Psychological Society was represented by Professor Jurovsky and Docent Machac.

(This report was presented at the final meeting by Docent Petran and approved by the plenum.)

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